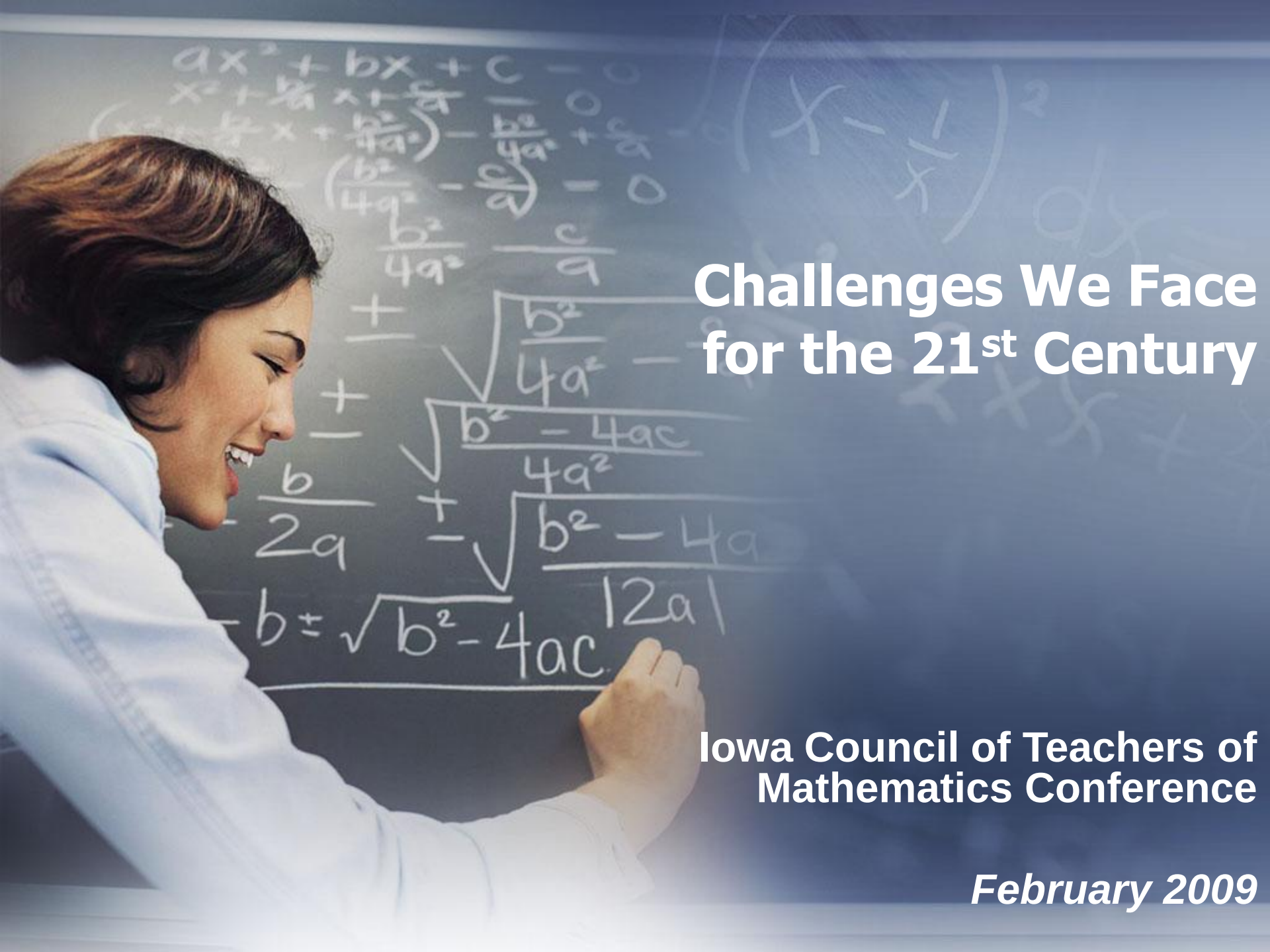


Challenges We Face for the 21st Century

Iowa Council of Teachers of Mathematics Conference

February 2009

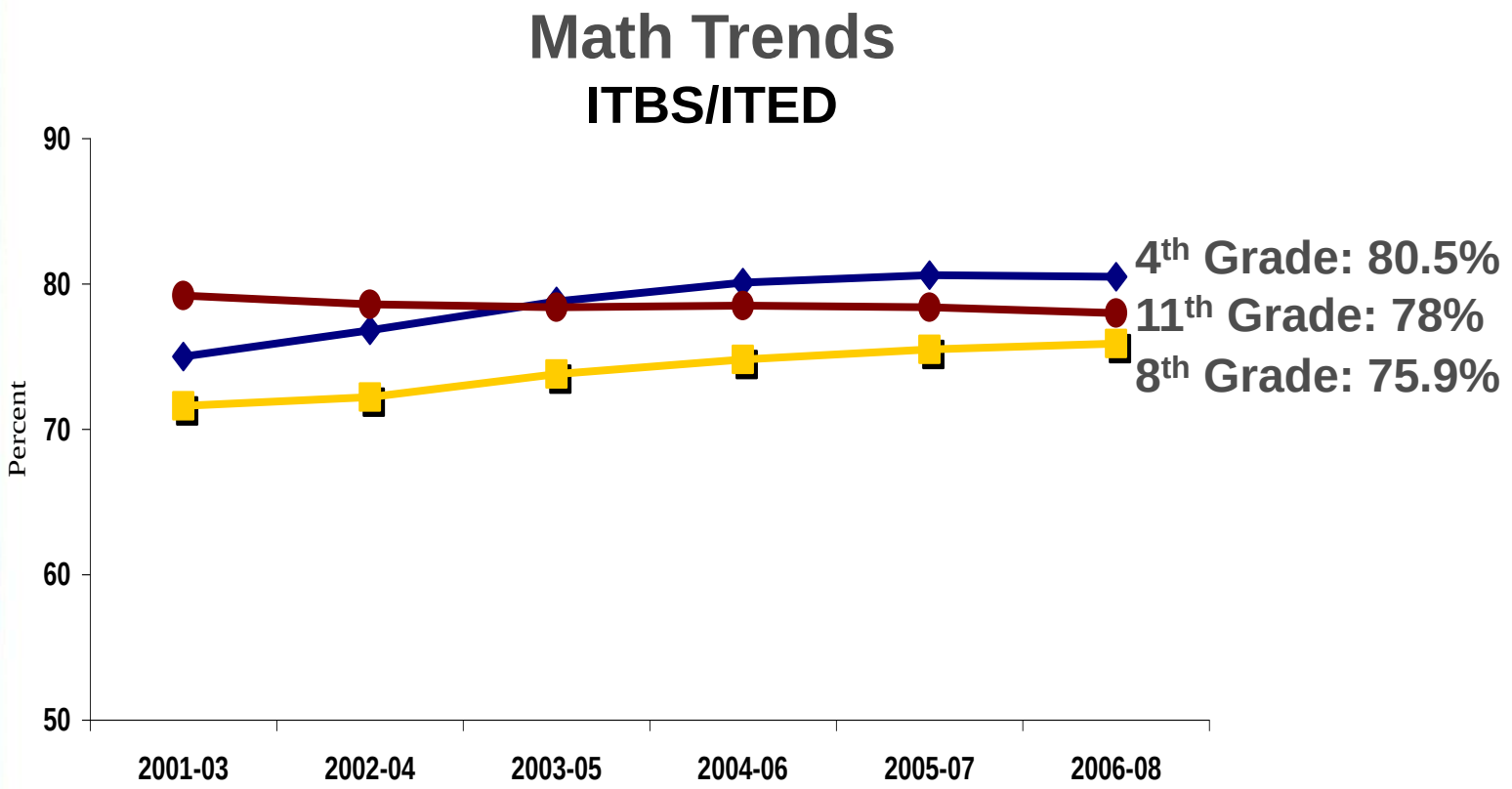
Our Current State

- Achievement
- Course-taking patterns
- Graduation rates
- Postsecondary
- Teacher supply and demand

Desired State

- Iowa Core Curriculum
- 21st Century Skills
- Teaching & Learning
- Assessment

Student Achievement

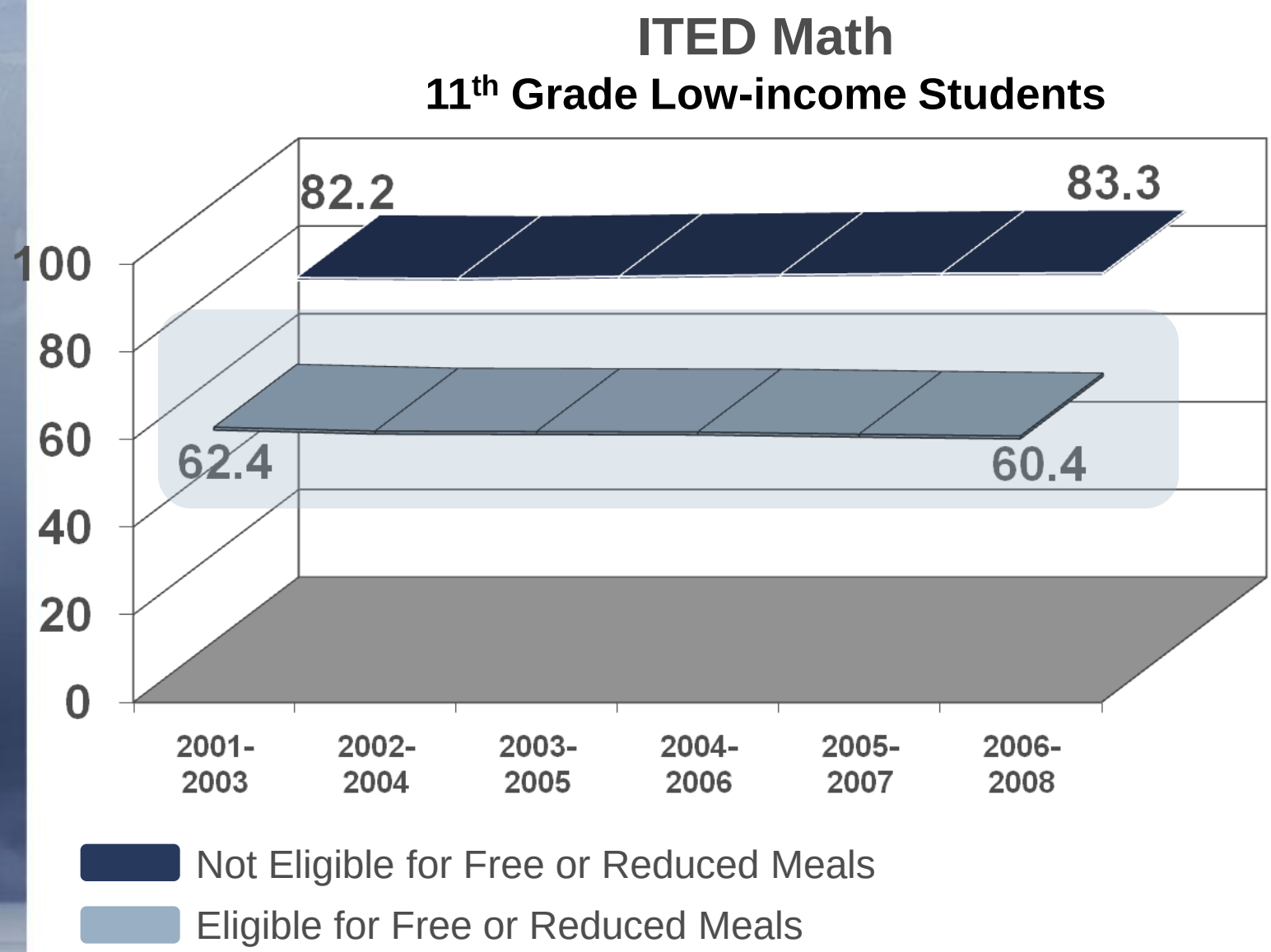


Student Achievement

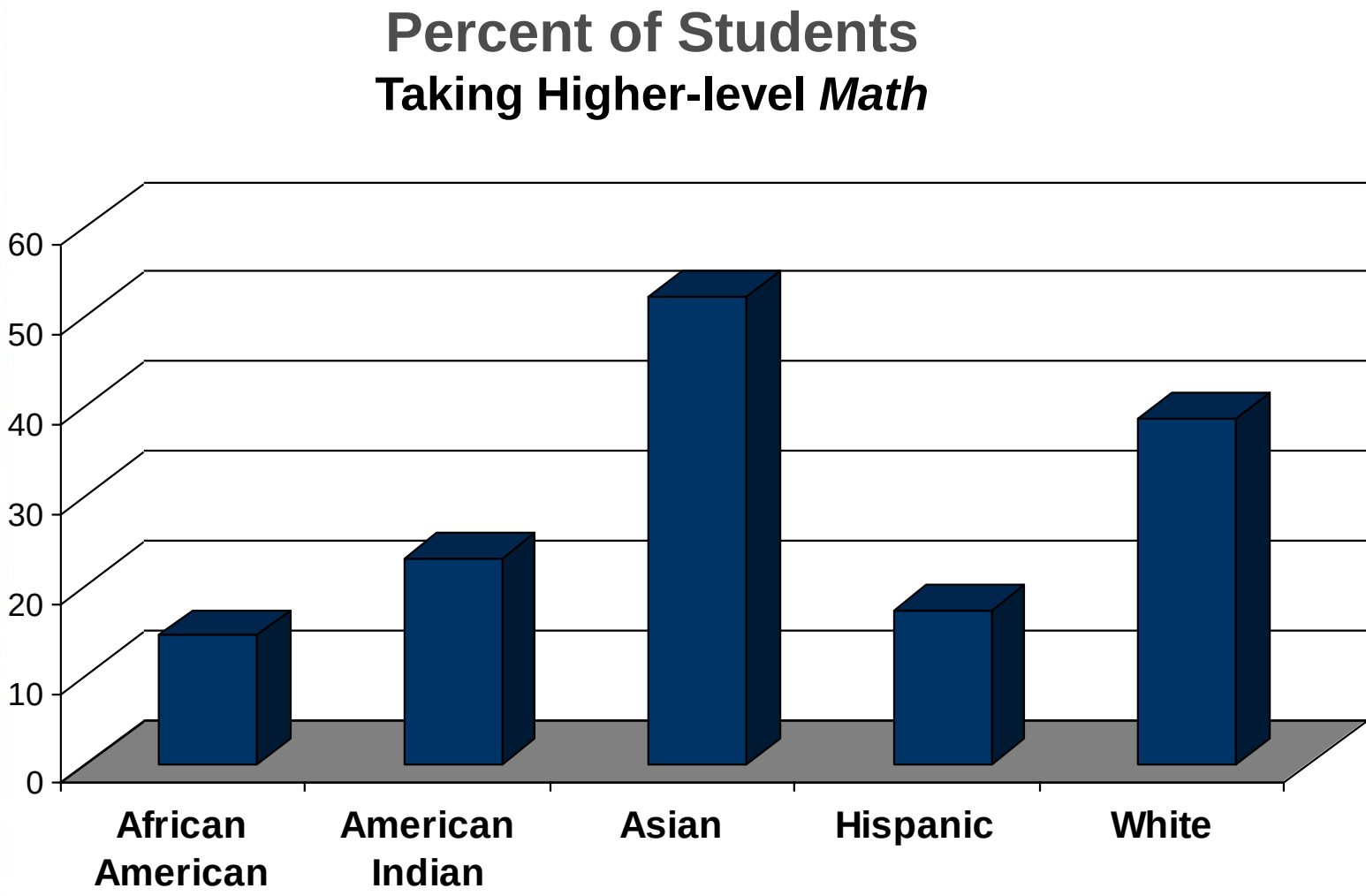
11th Grade ***Math***
Percent Proficient

	2001-03	2006-08	
Asian	78.6%	77.7%	- 0.9%
American Indian	61.3%	63.1%	+1.8%
African American	43.8%	44.7%	+ 0.9%
Hispanic	52.8%	54.3%	+ 1.5%
White	81.1%	80.6%	- 0.5%

Student Achievement

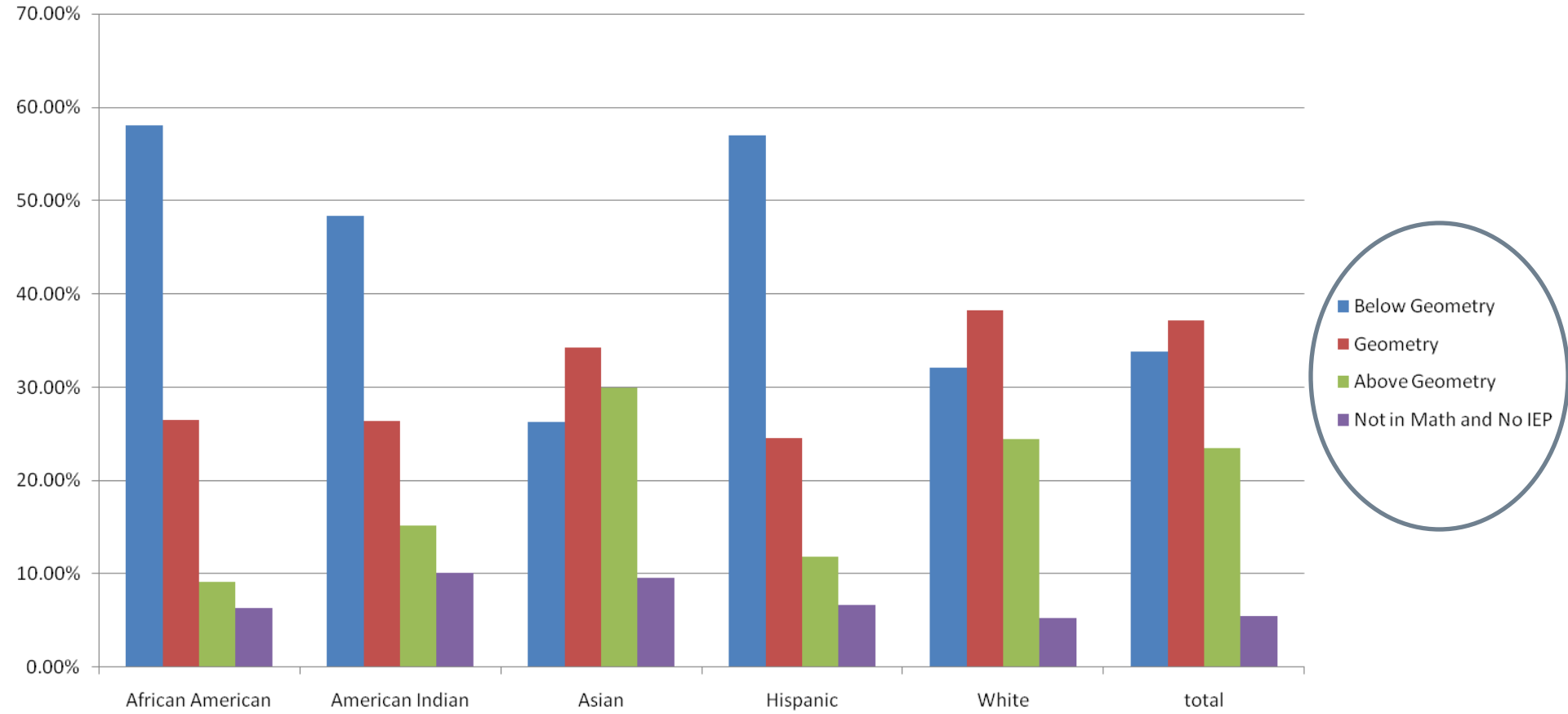


Student Achievement



Student Achievement

Class of 2008: Enrollment of Math Courses

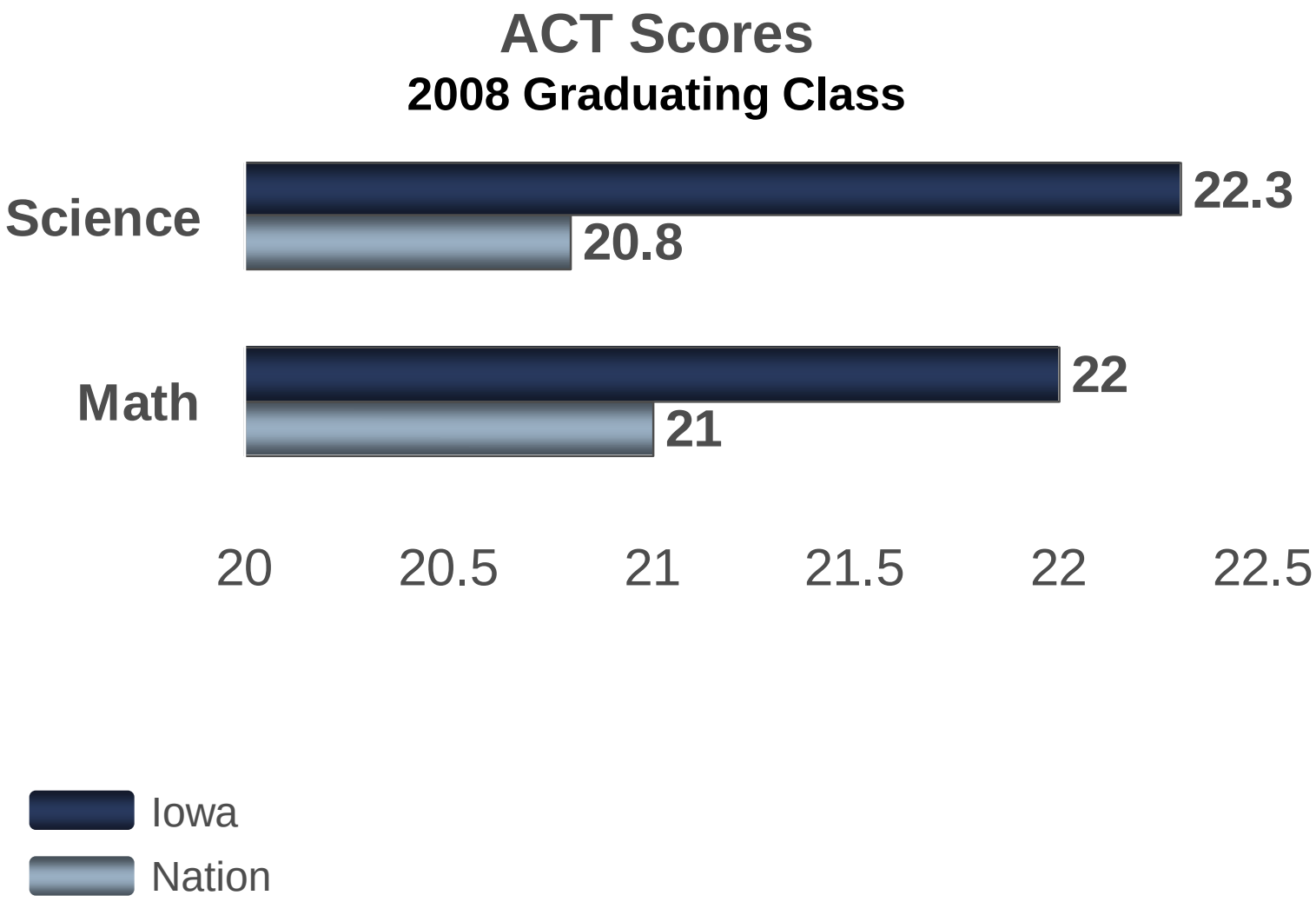


Student Achievement

What Students are Learning…

District Size	*Higher-level Math*	*Chemistry*	*Physics*	*Foreign Language*
<300	29.5%	59.4%	24.1%	77.7%
300-599	30.8	58.4	23.6	79.0
600-999	34.1	59.9	23.1	81.1
1,000-2,499	40.4	60.7	23.9	81.6
2,500-7,499	43.2	64.8	25.4	82.9
7,500+	34.3	54.4	26.6	78.3
State	37.1	59.4	24.8	80.5

Student Achievement



Student Achievement

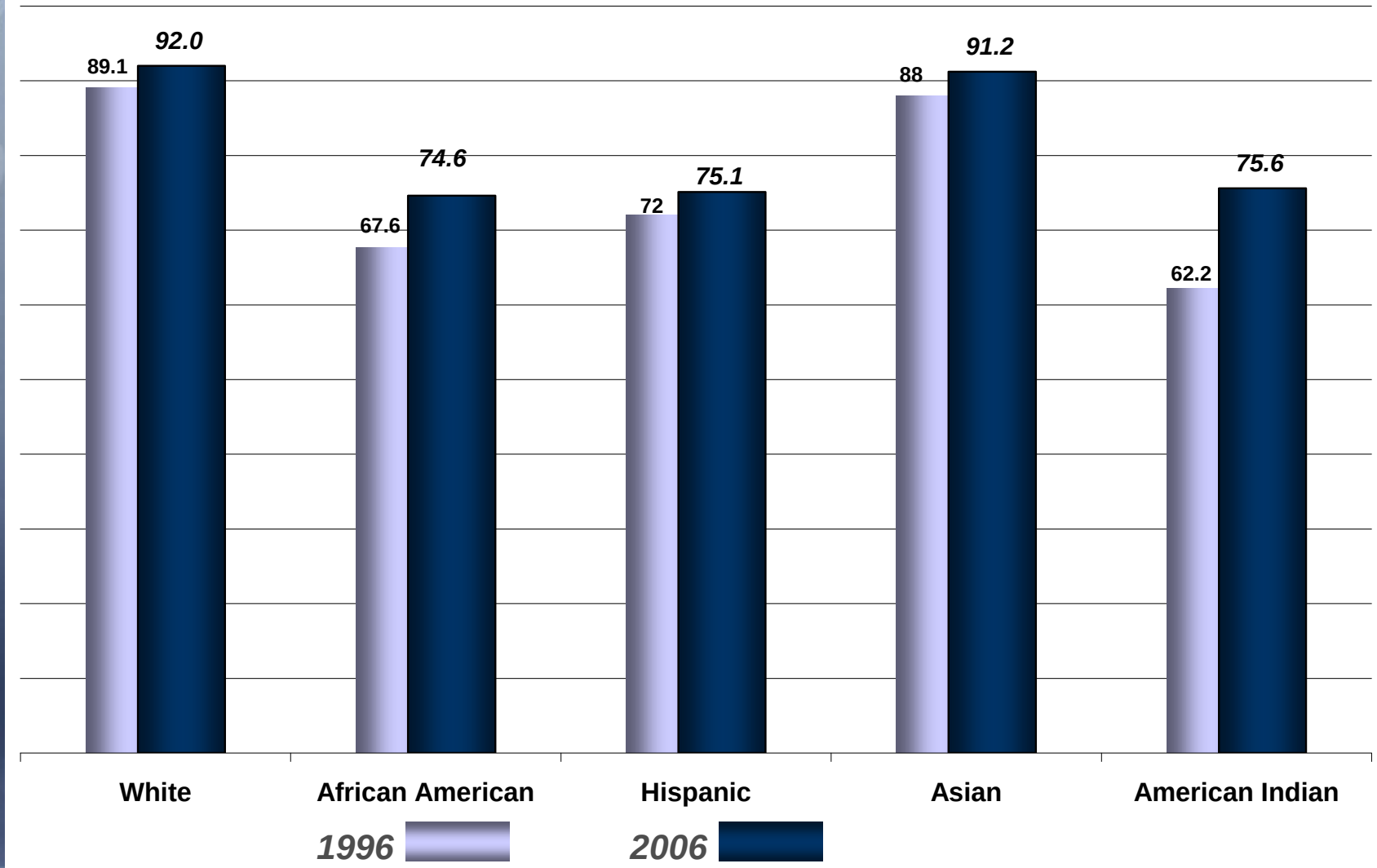
ACT Scores

2008 Graduating Class by Race/Ethnicity

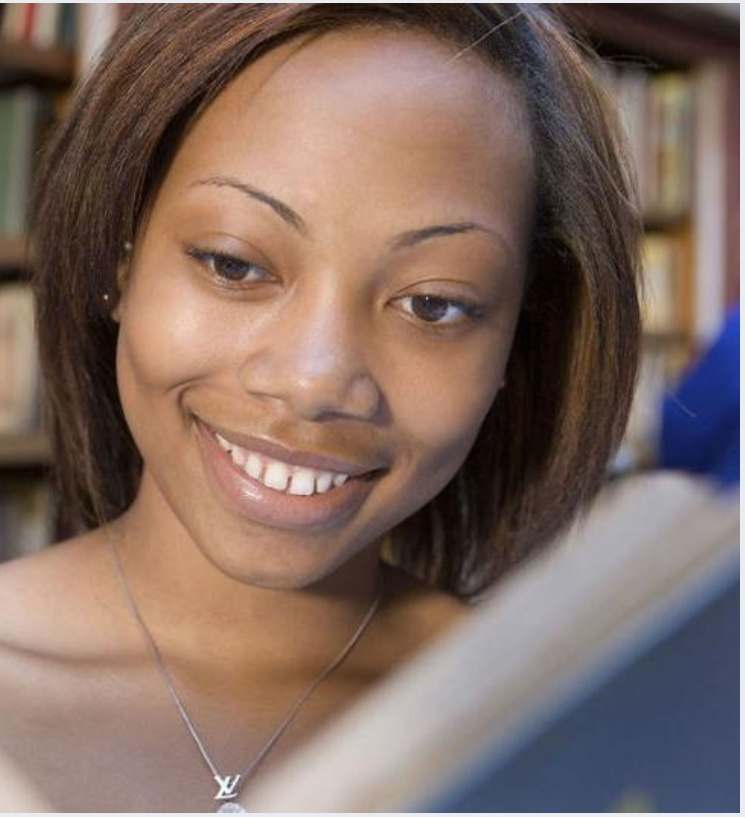
All Students	22.4
African-American	17.8
American Indian	20.9
Caucasian American	22.5
Hispanic	20.1
Asian American	22.7
Other/No Response	22.8

Student Achievement

Graduation Rate by Race/Ethnicity



Student Achievement

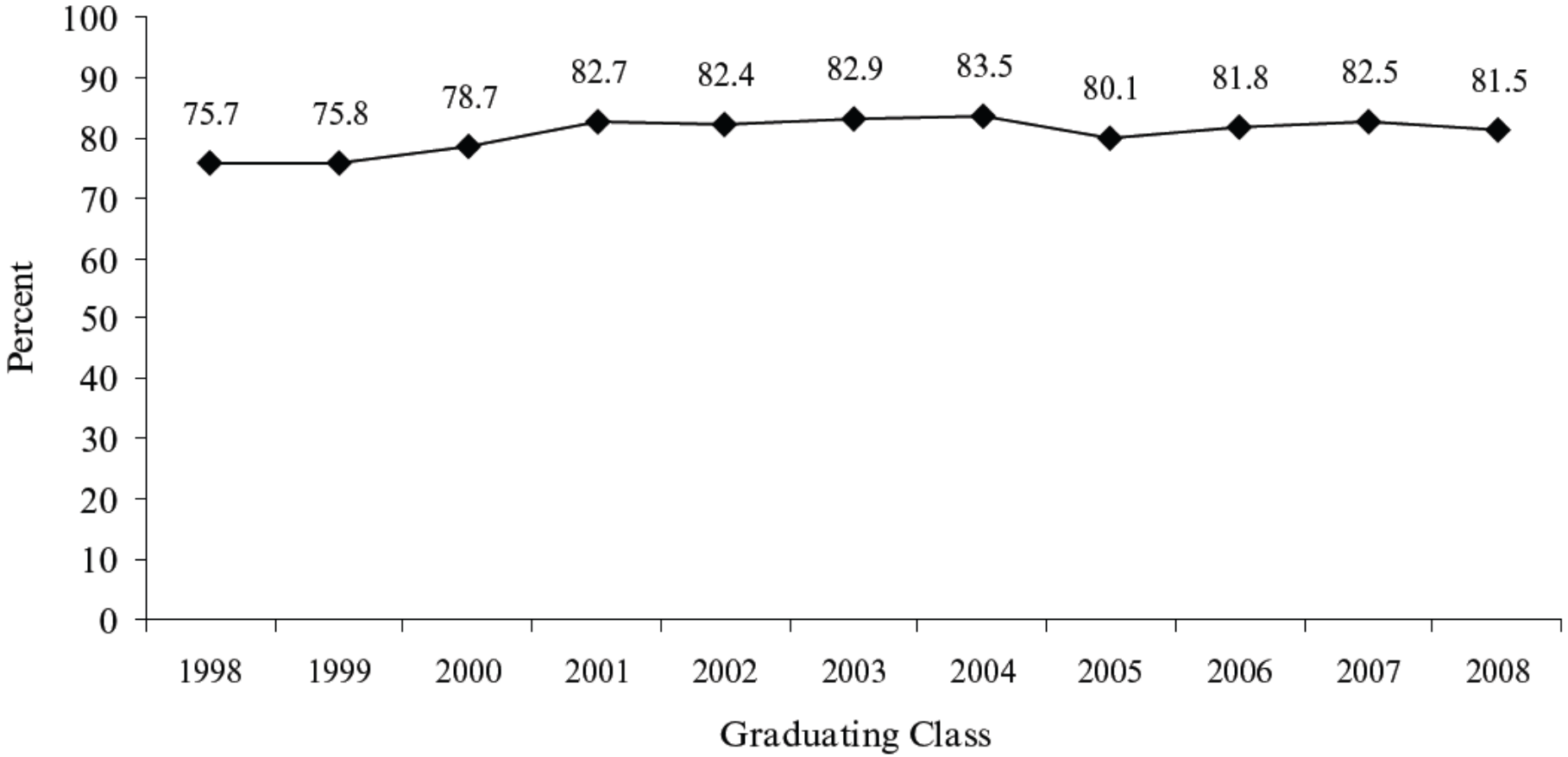


90.5% graduation rate, among top in nation

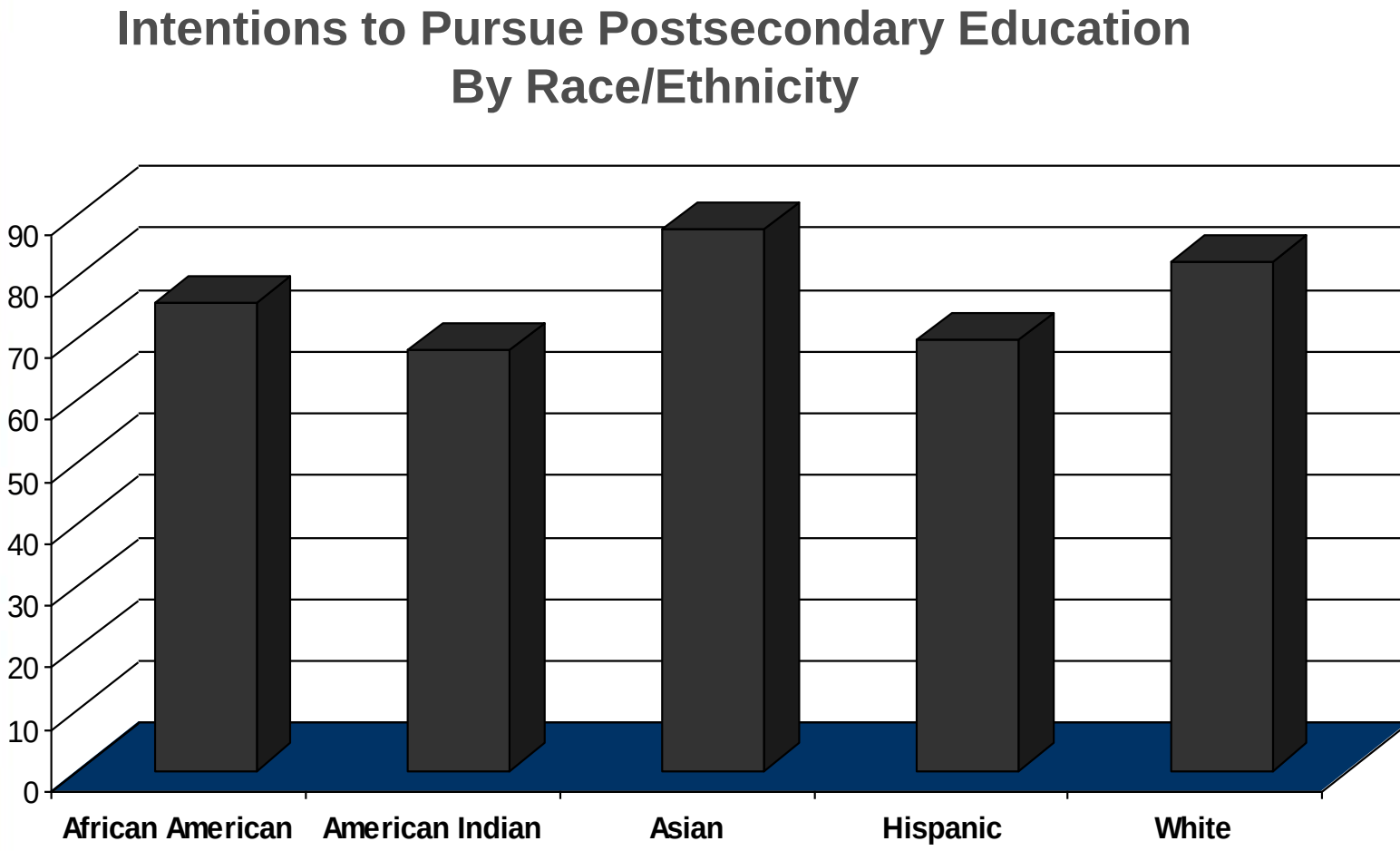
81.5% plan to pursue additional training or college after high school

Student Achievement

Intentions to Pursue Postsecondary Education



Student Achievement



Teacher Shortages: Math/Science

2007-2008

7-12 Math Teachers	Biology Teachers	Chemistry Teachers	Physics Teachers
Ready to Retire	Ready to Retire	Ready to Retire	Ready to Retire
214	185	116	101
Projected Graduates	Projected Graduates	Projected Graduates	Projected Graduates
120	85	38	16

Desired State

Core concepts & skills for all students regardless of postsecondary goals or career track.

Iowa Core Curriculum

Literacy
Reading, Writing, Viewing, Speaking, Listening

Mathematics
Problem Solving; Communication; Reasoning and Proof; Ability to recognize, make, and apply connections; Ability to construct and apply multiple connected representations

Iowa Core Curriculum

Science
Science as Inquiry, Earth and Space Science, Life Science, Physical Science

Social Studies
Behavioral Sciences, Economics, Geography, History, Political Science/Civic Literacy

Iowa Core Curriculum

21st Century Skills

Financial Literacy
Health Literacy
Civic Literacy
Technology Literacy
Employability Skills

Global Literacy – *yet to come*

Iowa Core Curriculum

Financial Literacy

- Demonstrate financial responsibility and planning skills to achieve financial goals for a lifetime of financial health
- Manage money effectively by developing spending plans and selecting appropriate financial instruments to maintain positive cash flow
- Make informed and responsible decisions about incurring and repaying debt to remain both creditworthy and financially secure
- Evaluate and identify appropriate risk management options, including types of insurance, non-insurance, and identity protection
- Assess the value, features, and planning processes associated with savings, investing, and asset building, and apply this knowledge to achieve long-term financial security with personal and entrepreneurial goals in a global market
- Understand human, cultural, and societal issues related to financial literacy, and practice legal and ethical behavior

Beyond “basic” to skills for today & tomorrow

99%

- Of voters say our country’s future economic success is teaching & learning 21st century skills.

80%

- Of voters say the skills students need for today’s jobs is different than 20 years ago

Teaching & Learning

- High Expectations
- Engagement
- “Mile deep – inch wide”

Assessment: For what?

1. Accountability
2. High-stakes decisions
3. Information
4. Alignment
5. Beyond easy to measure
   - Knowledge & Skills
6. Different forms for what & who?
   - Formative – Adjust instruction
   - Summative

Iowa Core Curriculum

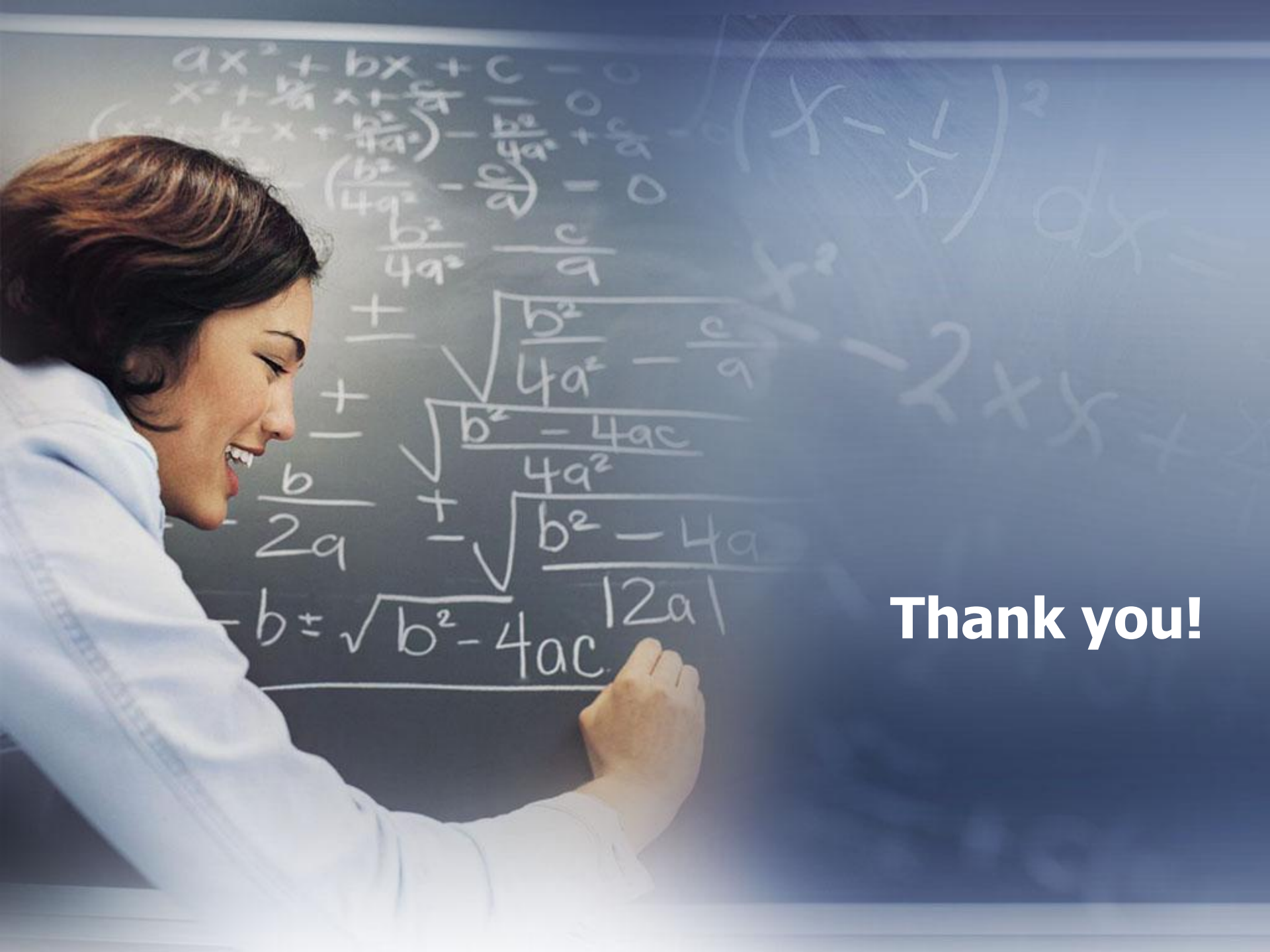
Accountability
- Iowa Tests

Summative
- District assessments

Formative
- Teacher driven at the classroom level

Benchmarks
- District/classroom

Iowa CORE Curriculum


Thank you!